REZAP® PRO

THE ULTIMATE BATTERY CHARGING STATION

REDUCE • REUSE • RECYCLE

USE & CARE GUIDE

DIGITAL WORKS

www.rezap.com

DIRECT ALL TECHNICAL SUPPORT TO:
support@digitalworks.com.au

ENERGY HUB FOR THE MODERN FAMILY

Welcome to your REZAP® PRO - Model RBC889.
The device represents Digital Works' latest and most advanced battery charger yet. It employs state-of-the-art; multi-chemistry battery charging technology and innovative *active charge monitor* technique to ensure each battery is individually custom charged. REZAP® PRO is an all-in-one, next generation battery charger that satisfies all the complex battery needs of modern family homes. It charges all your rechargeable batteries. Its new *open architecture* design ensures it can support a widest possible range of current and future digital devices. It also allows you to *RECYCLE* your non-rechargeable alkaline batteries at home and at work. It's safe, it's easy to use, it saves you money and helps the environment.

Disclaimer:
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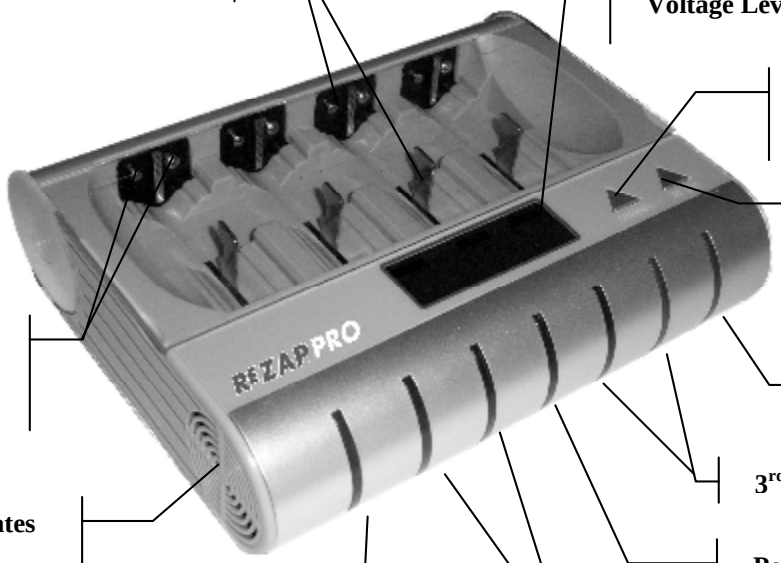
ENGLISH

Discovering your
REZAP® PRO - Model RBC889



Centre Positive & Negative Contacts Within Each Slot Are for Charging 1.2 & 1.5V Batteries.

LCD Shows Selected Channel Number, Battery Charging Status & Selected DC Out Voltage Level.

Channel 1, 2, 3 or 4 Select Button

DC Out Voltage Select Button

The 2 Round Terminals Within Each Slot Are for Charging 9V Batteries.

USB LED

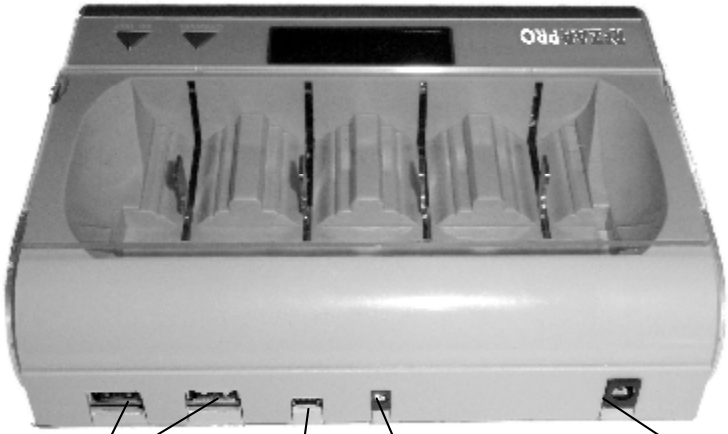
3rd & 4th Channel LEDs

Built-in Fan Activates When Required to Keep System Cool.

Power LED

1st & 2nd Channel LEDs

DC-OUT LED



2 x High power USB Ports for Charging of 5V Digital Devices.

12V DC Input Socket

Custom mini USB port for future upgrade – expansion link to an external module that supports the charging of Lithium-ion battery packs.

Variable DC Voltage Output Socket — 4.2V, 6V & 8.4V levels acting as charging power sources for many personal digital audio & visual devices.

ESSENTIAL LCD INDICATORS

– Graphical illustration of battery cell being charged.

– Battery is being analysed.

– Standard charging for sensitive batteries.

– Fast charging when applicable.

– Battery is charged and ready for use.

– Sensitive battery has been *rezapped* and ready for use.

– Battery is bad and or no longer *rezappable.* Prompt disposal is required to avoid eventual battery leakage.

– Fan is ON to cool down the internal circuitry when required. When FLASHING, fan is not working and for safety reason, charger only operates in standard charge mode. When all batteries are removed from the charger, fan will be swiched off automatically.

– **V**ariable DC-Out port is ON.

CAUTION - Care is required when making DC-Out voltage selection as over-voltage may lead to damage of equipment being powered. ALWAYS select voltage first and then plug in device.

- Select 4.2V – to power devices accepting 3.0V – 4.5V input.
- Select 6V – to power devices accepting 5.0V – 6.5V input.
- Select 8.4V – to power devices accepting 7.0V – 9.0V input.

– Sound alert is only active when channel select is pressed. Alert sequences are as follows:

- 1 short beep – Channel select returned to number 1 position. After 5 seconds delay with no further key pressed, charge status of the selected battery is alerted.
- No sound – selected channel has no battery.
- 2 short beeps – selected battery is being charged.
- 1 long beep – selected battery is charged and ready for use.
- 2 long beeps – selected battery is bad.

WHAT COME WITH THE PACKAGE

Items that come with the packe include:

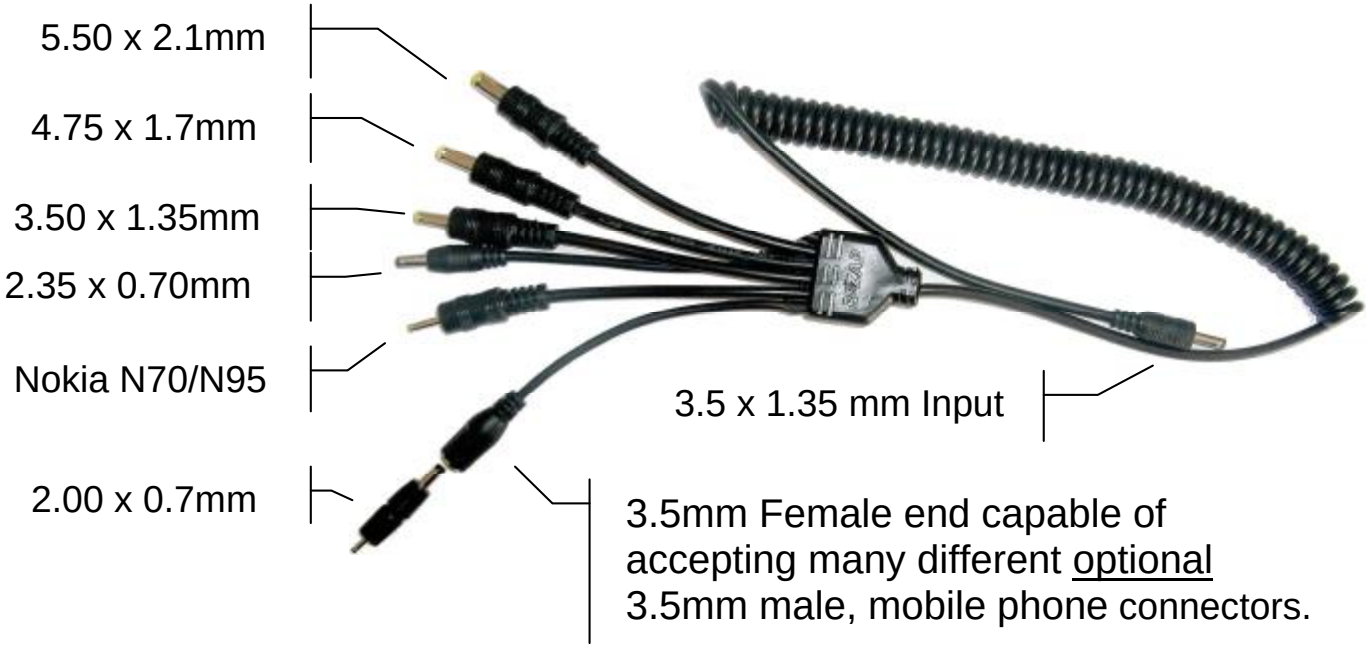
- REZAP® PRO RBC889 Charger,
- Approved switching power supply,
- Multi-headed DC-OUT cable with 6 diferent connectors,
- This User Instruction Guide.

REZAP® PRO
RBC889 Charger

Approved
12V, 2000mA,
100-240V
Power Supply

DC-Out Cable
with 6-connectors

MULTI-HEADED DC-OUT CABLE (1-IN, 6-OUT CABLE)


5.50 x 2.1mm
4.75 x 1.7mm
3.50 x 1.35mm
2.35 x 0.70mm
Nokia N70/N95
2.00 x 0.7mm
3.5 x 1.35 mm Input
3.5mm Female end capable of accepting many different optional 3.5mm male, mobile phone connectors.

Supported Devices accepting the above sized, round-connector inputs are:

- Portable DVD players, Digital Cameras, Digital Video Cameras,
- Sony® PSP, MP3, MP4 PMP,
- Blue Tooth Ear Phones, 2-Way Radios,
- Nokia® Mobile Phones.

OPTIONAL ACCESSORIES

Followings are optional add-on items for the REZAP® PRO, coming soon at a later stage. Please check available status at: **www.rezap.com**

- Entertainment Cable Kit Include support for:
  - Nintendo® DS Lite™ handheld game console
  - Nintendo® DS™ handheld game console
  - Nintendo® Gameboy Advance SP™ handheld game console
  - Sony® PSP™ handheld game console
  - Apple® iPod™MP3 & MP4 devices
  - Mini USB Data and charge cable connector

- Communication Cable Kit include support for popular model phones from:
  - Sony Ericsson®
  - Motorolla®
  - Nokia®
  - LG®
  - Samsung®
  - Siemens®

- In-car Power Adaptor Kit enables the REZAP® PRO to operate on 12V and 24V car batteries.

- Universal Lithium-Ion Battery Pack Charge Module Add-on.
  - Extends the REZAP® PRO's support of the charging of many current and future digital devices that have non-standard and or proprietory power input connectors.

Note: Specifications of accessaories are subject to change without prior notice for further design improvements.

CONGRATULATIONS

Thank you for your purchase of the REZAP® PRO. Our products are engineered to meet the highest standards of quality, functionality and design. We hope you get the most out of it and enjoy using it for many years to come.

IMPORTANT

Please read all the information contained in this booklet before using the charger. It gives you important instructions on safety, use, and maintenance of the appliance. Please keep these instructions in a safe place and pass them on, if necessary, to the next owner. A digital, “PDF” version of this guide is available on-line at our website: **www.rezap.com**

FOR YOUR SAFETY

- Risk of electric shock. Dry location use only. This charger is for indoor use only and should only be connected to the same mains voltage as shown on the rating plate.
- Do not operate the charger with a damaged cord or if the housing shows visible signs of damage.
- Charge only 1 to 4 pieces of AAA, AA, C, D and 9V batteries of type Alkaline, Rechargeable Alkaline Manganese (RAM), Nickel Cadmium (NiCd) or Nickel Metal Hydride (NiMH) only. Other types such as Carbon Zinc (heavy duty) or primary Lithium are not supported.
- DO NOT attempt to charge any battery that has sign of rust, chemical leakage or deposit on the terminals.
- Batteries rejected by the charger or those with very short service life after recharged should be disposed of promptly to avoid leakage causing damage to the charger and or electronic devices.
- The charger is not intended for use by young children or infirm persons without supervision.

- Do not remove any service covers from the charger. There are no user serviceable parts inside. Any repair should only be carried out by a trained technician at an appointed service outlet.
- The charger must be stored where weather conditions cannot affect it. The device must not be subjected to humidity, heat sources or immersion in water.
- If the charger is wrongly operated for a purpose other than that for which it is intended as per the instructions set out in this guide, no liability can be accepted for any possible damage.
- Turn the power off and un-plug the power adaptor when the charger is not in use and before cleaning. This also helps prolonging the charger's life and reducing electricity consumption.
- If your charger has a fault, please contact your retailer or local distributor near you.

KEY FEATURES OF REZAP® PRO

- Advanced microprocessor control for safe and user-friendly operation.
- Supports most domestic-sized batteries including AAA, AA, C, D, 9V and Sony® prismatic 1.2V NiMH rechargeable (also known as gum-stick) size often used in Sony® Walkman, Discman or MD players.
- Supports Alkaline, RAM (Rechargeable Alkaline Manganese), NiCd (Nickel Cadmium) and NiMH (Nickel Metal Hydride) batteries.
- Automatic detection of different sizes and types of batteries.
- Individual charging feature supports up to four mixed sizes and types of batteries simultaneously.
- Supports charging of multiple 9V batteries (up to 4 x 9V batteries).
- Extends 9V Alkaline battery life up to 5* times.
- Extends 1.5V Alkaline battery lives up to 10* times.
- Recharge RAM batteries up to 25* times.
- Recharge NiCd and NiMH rechargeable batteries up to hundreds of times.
- Overcharging protection prevents damage to batteries.
- Built-in advanced LCD function showing battery charging status and dynamic voltage read-out of each battery under processing.

- Built-in dynamic battery tester function measuring the strength of each battery and display its condition on the LCD screen.
- Built-in sound alert for the visually impaired.
- Built-in dual high power USB ports.
- Built-in FAN for cooling of the internal charger's circuitry when required.
- Built-in variable DC-OUT supporting the charging and or powering of many personal digital devices such as digital cameras, video camcorders, portable DVD players, personal media players, PDAs and more.
- Support the charging of many popular portable handheld game consoles and MP3 devices such as Sony® PSP, Nintendo® GBA, NDS and NDS Lite and Apple® iPod via standard USB cables came with the consoles.
- Support the charging of many popular mobile/cell phones such as Nokia®, Motorola®, Sony Ericsson® and more with the optional mobile connectors.
- Charger can be operated from 12V/24V In-car power supplies via the optional Rezap® In-car cable kit.
- Usage of detachable & universal world voltage (110-240V, 50/60Hz) power supply suitable for travellers.
- Australian technology.

* *Cycle life depends strongly on factors such as brands, quality and conditions of batteries as well as rate of discharge, cut-off voltage and depth of discharge of batteries. Depth of discharge is defined as the level to which battery voltage is taken during discharge. Discharging to less than the recommended voltage is known as over-discharge. The shallower the discharge, the more cycles the battery will provide. This is true for all battery chemistries.*

SAFETY FEATURES

REZAP® PRO RBC889 has been designed to meet the highest safety standards. A combination of hardware and software controls has been employed to deliver the following multi protection schemes:

- Alkaline battery charge-safe protection,
- Faulty battery detection & rejection,
- Overcharge protection,
- Short circuit protection,

- Wrong polarity Protection,
- Negative delta voltage protection,
- Zero delta voltage protection,
- Timer Protection,
- Temperature protection via built-in cooling fan,
- Cooling fan failsafe protection.

The REZAP® Pro, RBC889 complies with the following International Standards for electrical safety:

- AS/NZS 3108:1994; AS/NZS 3350.1:2000; AS/NZS 3350.2.29:2001
- EN 206041A; EN 60335.1; EN 60335.2.29
- EMC & C-Tick (AS/NZS 1044:1995); CE (EN50082-1)
- FCC Part 15 Class B - ANSI C63.4-1992
- CSA Technical Information Letter No. Q-13 (Battery Charger for Charging Alkaline Batteries)

QUICK START

STEP 1: TURNING THE CHARGER ON

- Plug the 12V switching power supply into a proper indoor electrical outlet and connect its output cable to the 12V input socket at the back of the charger. Switch on the power from the mains, the blue LED lights up indicating the charger is active and ready for use.

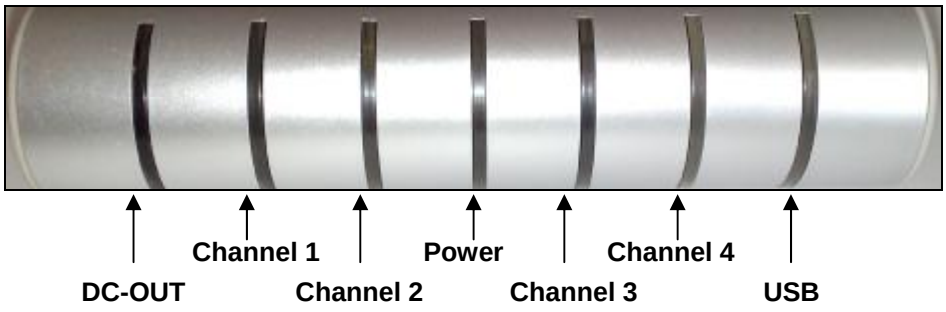
STEP 2: CONNECTING THE BATTERIES TO THE CHARGER

- Ensure that batteries are in good condition before charging them. DO NOT attempt to charge any battery that has sign of rust, chemical leakage or deposit on the terminals. These should be disposed of immediately to avoid subsequent damage to charger and/or electronic devices.
  - o Although battery leakage found on some faulty, damaged or old batteries will typically not cause immediate damage to unprotected skin, it is best to avoid contact, or if contact occurs, immediately wash the exposed area with soap and water.

- Place used batteries to be charged into the charger slots according to their different sizes as follows and ensure all batteries are connected correctly to the charger. Pay attention to battery polarities.
  - o AAA, AA, C, D and 9V batteries can be inserted into any of the four main slots.
  - o When charging of “C” and “D” size high capacity batteries, the lid is designed to be left open which helps to cool the batteries being charged.

STEP 3: OBSERVING THE CHARGERS STATUS.

- **LCD INDICATORS:**
  Refer to page 4 for a full list of explanations of the essential indicators.
- **LED INDICATORS:**
  Once batteries are firmly in contact with the chargers battery terminals, the charger’s indicator lights will be activated, showing the different status as follows:



- o **BLUE LIGHT ON –** Power is ON and the charger is ready for use.
- o **GREEN LIGHT FLASHING –** Battery is being charged.
- o **GREEN LIGHT ON –** Charging is finished and battery is ready for use.
- o **GREEN LIGHT OFF –** No battery present or improper battery connection

- **GREEN LIGHT TURNS OFF AFTER FLASHING –** Battery is faulty, exhausted and or is no longer rechargeable. Prompt dispose of these batteries to avoid eventual battery leakage.
- **RED LIGHT ON –** USB or DC-OUT ports on active mode when there are devices connected to these ports on the charger.
- **RED LIGHT OFF –** No Devices connected to the USB or DC-OUT ports.

STEP 4: INTERACTION WITH LCD CONTROL PANEL.

- **CHANNEL SELECT BUTTON** - when pressed will move the focus point of the LCD screen from the left to the right channel in succession and the cycle repeats as follows:

  Æ CHANNEL 1 ð CHANNEL 2 ð CHANNEL 3 ð CHANNEL 4 Ê

  The selected channel shows the charging status and voltage condition of the battery in it under the **STATUS** heading.
- **DC-OUT SELECT BUTTON** - when pressed the variable DC voltage output at the back of the charger changes from lowest to highest level in succession and the cycle repeats as follows:

  Æ 4.2V ð 6V ð 8.4V Ê

  The selected DC voltage output is regulated at a set level to match the required power input setting of the appropriate digital device being powered or charged.

DC-OUT CHARGING FUNCTION

The REZAP® PRO is equipped with a variable voltage, DC-OUT socket at the back of the charger. This socket outputs three different preset regulated voltage levels of 4.2V, 6V and 8.4V which can be selected by the DC-OUT select button, located on the control panel. Linking via a 1-IN, 6-OUT multi-headed DC-OUT cable (described in details on page 5), allows the charger to power a range of otherwise unpowered devices or charge up different battery packs in many self-powered devices.

- **DC-OUT DEFAULT VOLTAGE:**
  - By default, the DC-OUT setting is initialised at the lowest level of 4.2V when the charger is first powered ON.

- **VOLTAGE SELECTION:**
  - Select 4.2V – to power devices accepting 3.0V – 4.5V input.
  - Select 6V – to power devices accepting 5.0V – 6.5V input.
  - Select 8.4V – to power devices accepting 7.0V – 9.0V input.

⚠ CAUTION:

- When the DC-OUT function is used to power or charge external digital devices, proceed with caution and ensure the selected voltage does match with the required input voltage of the device. Failure to do so may result in the damage of the device being powered.
- In general most mobile phones and small sized digital devices are charged using DC-OUT voltages of 4.2 and or 6V whereas bigger sized devices such as portable DVDs, 2-Way Radios and Digital Video Cameras are charged using the 8.4V setting.
- ALWAYS select DC-OUT voltage first and then plug in the device. Once a device is plugged in, the selected voltage will be locked in and further pressing of the DC-OUT button will have no effect. This feature ensures accidental change of the DC-OUT voltage will not happen. Further change in voltage can only be made by first unplugging the device and reselecting a different voltage.
- **DO NOT MODIFY OR WIRE** the DC-OUT cable and try to connect it directly to any type of battery packs or cells. Such actions are dangerous. These batteries should only be charged within the devices from which they are used in. Batteries not supported (such as notebook/laptop battery packs) are outside the scope of this charger and should not be forcibly charged in this charger.

DUAL USB CHARGING FUNCTION

The REZAP® PRO is also equipped with two high powered USB ports located at the back of the unit. By using standard USB cables that come with many digital devices at time of their purchase, the charger can power a range of otherwise unpowered devices or charge up different battery packs in many 5-volt, self-powered devices.

DYNAMIC BATTERY TESTER FUNCTION

The REZAP® PRO has a built-in dynamic battery tester function, which constantly monitors and measures the voltage conditions of all batteries being charged. This information is always there in the system and readily available on-demand, at a touch of a button will be displayed on the LCD screen. Notes:

- Rechargeable and Alkaline batteries are rated at 1.2V and 1.5V respectively. FULL charge condition for NiCd and NiMH batteries only show a voltage reading between 1.34V to 1.44V whereas alkaline batteries show 1.5V or more.
- Some exhausted and or faulty alkaline batteries often show a false voltage of up to 1.5V or higher when measured by means of a volt meter or the built-in tester function, however when these are put to use, they quickly die out. These batteries are considered no longer useful and should also be disposed of straight away to avoid eventual battery leakage.
- During the charging of alkaline batteries, the charging voltage can rise up to 1.8V or higher. This is quite normal and should not be alarmed. Once the charging process is finished, the battery voltage will stablise and drop down to a lower level.

IMPORTANT NOTES WHEN USING THE REZAP® PRO CHARGER:

- Charge only Alkaline, RAM (Rechargeable Alkaline Manganese), NiCd and NiMH batteries. DO NOT charge Carbon Zinc (such as those with no battery type printed on them or those labelled as SUPER HEAVY DUTY or GENERAL PURPOSE) or *primary* Lithium batteries (such as those used in cameras, 3V or 6V and labelled – LITHIUM*)* in this charger (Refer to Table 1 for details of various different battery types and how to recognize them). These unsupported battery types will be rejected or not properly charged if put into the charger.
- Charge alkaline cells before they go completely flat. If the cells are discharged beyond the point of return (less than 0.9V), chances are that they will not be revived properly. Most electronic devices cut off at the 0.9 volt level; however devices such as torches, radios, clocks, remote controls or the like do have the tendency to drain the batteries completely.
- Alkaline cells should be disposed of promptly if they are rejected by the charger (green light turns off after flashing) or their service life is very short after recharged.
- After batteries are charged, only batteries that show the same voltage strength should be used together. For alkaline batteries, use those with voltage strength above 1.44V together and for rechargeable batteries, use those with voltage strength above 1.30V together. Mixing weak or partially charged with fully charged batteries will result in your device not functioning properly or not powering on at all. Also remember not to mix different battery types together (eg: Alkaline with rechargeable).
- For best results, charged alkaline cells should be promptly removed within a few hours after charging is completed. Continuous connection to the metal plates (whether the charger is ON or OFF) for a prolonged period will shorten battery life. Recharged alkaline cells should be used as soon as possible as they are not suitable for long term storage due to their rapid self discharge.

- Different brands of alkaline cells may give different results, depending on the chemical composition used in making the batteries. Do not be surprised to find that some top brand alkaline cells may yield fewer cycle lives than less well-known brands. Try different brands of batteries and decide for yourself the brands that work best in your applications and in the REZAP® PRO charger.
- The charger has four main slots with four corresponding green lights. Only put one battery per slot. Do not try to put one battery on top of another in a single slot.
- 9V alkaline batteries are not charged using “individual cell” technique due to their internal structure (multiple cells linked together in series to give a higher battery voltage). Any fault or weakness amongst the cells can result in the battery being poorly recharged or not useable at times. Do not hold high expectation on these batteries.
- 9V alkaline batteries when charged tend to expand slightly at their two ends. This is normal considering their outer case constructions are not made as strong as those of 9V rechargeable batteries.
- Cycle life is based on the battery receiving proper care and also depends on the depth of discharge. In general, shallow discharges provide more cycles than deep discharges.

CLEANING

Turn the power off and unplug the power supply before cleaning of the charger.

- The Plastic Body can be cleaned with a damp cloth and then wiped dry with a soft cloth. Do not use any abrasive or solvents on any plastic surface.
- The battery compartment contacts can be cleaned using a piece of cloth or used toothbrush dampened with Methylated Spirits solvent (available from most hardware stores). Alternatively a clean pencil eraser can be used to rub off any dirt and or deposit that might adhere to them.

EXTENDING BATTERY LIFE

- Keep extra batteries around for your convenience. Store batteries in a dry place at normal room temperature.
- When storing batteries, remove any load or short circuit from their terminals.
- When storing battery-powered devices for long periods (*i.e.*, more than a month), remove the batteries. This can prevent damage to the device from possible battery leakage. Also, the batteries can be used for other applications while the batteries are still "fresh". Batteries should also be removed from equipment while it is being powered by household (AC) current.
- When using single-cell rechargeable NiCd batteries, be sure to discharge the cell completely before recharging it, thus counteracting the "memory" effect.
- Do not use batteries in high-temperature situations (unless the battery is designed for that temperature range). Store batteries as far away from heat sources as possible. The electrical potential of the battery will degrade rapidly if it is exposed to temperatures higher than those recommended by the manufacturer.
- Follow instructions on your equipment regarding proper insertion of batteries, making sure that the (+) and (-) terminals are aligned correctly.
- Remove worn-out batteries from equipment immediately to prevent possible damage from battery leakage. Always replace all batteries at the same time. Mixing old and new batteries or mixing types (such as alkaline with Carbon Zinc) will reduce overall performance and could cause leakage or rupture.

GENERAL BATTERY SAFETY TIPS

- Do not short-circuit a battery. A short-circuit may cause severe damage to the battery.
- Do not drop, hit or otherwise abuse the battery as this may result in the exposure of the cell contents, which are corrosive.
- Do not incinerate, expose the battery to moisture, rain or sources of extreme heat.
- Do not dispose of batteries in a fire. The metallic components of the battery will not burn and the burning electrolyte may splatter, explode, or release toxic fumes.
- Do not store batteries loosely or carry them loose in your pocket or purse. They can be shorted by contact with metal objects and leak or rupture.
- Do not let young children play with batteries, especially button and or 9V cells; these could accidentally be swallowed or licked at and may result in burns that may range from simply uncomfortable to serious.
- Do not allow direct body contact with battery chemicals. Acidic or alkaline electrolyte can cause skin irritation or burns. If acidic or alkaline electrolyte contacts skin or clothing, wash immediately with soap and water. If it enters the eye, immediately flood the eye with cold running water for at least fifteen (15) minutes and seek medical help immediately.
- Make it a habbit to wash hands straight after handling batteries, especially used ones as they may have developed a thin film of acidic or alkaline electrolyte around them.

WARRANTY & SUPPORTS

The REZAP® Pro RBC889 charger is supplied with a 12 month parts and labour, return to base warranty. We will repair or replace the product at our option if defective in workmanship or material from normal domestic use for one year from date of purchase. Any customer feedback and/or support queries should be directed to: **support@digitalworks.com.au**

REZAP® PRO RBC-889 SPECIFICATIONS

Microcontroller	Digital Works' state-of-the-art proprietary Multi-Chemistry battery charger's high performance 8-bit microprocessor, CMOS, fully static, employing advanced RISC architecture with integrated analogue-to-digital converters and multi-channel high speed input/output ports controlling the whole charging process in real time.
Input Voltages	DC 12V, 2A Switching Power Adaptor (AC 100 - 240V 50/60Hz, 0.8A Max) for SAA, GS & BS Standards or UL, CUL & JIS Standards
Output Rating	DC 12V, 2A max, 24 Watts max.
Supported Battery Sizes	1 to 4 x AAA, AA, C, D & prismatic sizes (1.2 or 1.5V) 1 to 4 x 9V batteries
Supported Battery types	Alkaline, Titanium, RAM (Rechargeable Alkaline Manganese), NiCd and or NiMH batteries. (Do not attempt to charge battery type not specified.)
Supported Capacities	AA size – Up to 3,000mAh C & D size – Up to 8,000mAh
Charging Time	1 to 8 hours for Alkaline Batteries 1 to 16 hours for rechargeable batteries Note: time variation depends on type, make, size and condition of battery.
Charging Currents	Fully Automatic
Built-In Input Output Ports	• 2 x Standard USB ports for charging of various digital devices that accept USB power. Output current is regulated at 300mA per port. • 1 x DC-OUT (variable digital outputs of 4.2V, 6V and 8.4V) for charging and or acts as power source for various digital devices such as digital cameras and digital video camcorders. Output current is regulated at 300mA per port. • 1 x Mini custom USB interface port for future upgrades and expansions.
Battery Tester Function	Built-in simulation of voltmeter, which measures the strength of each battery and displays the voltage level via LCD.
Protection Schemes employed	• Alkaline battery charge-safe protection, • Faulty battery detection & rejection, • Overcharge protection, • Short circuit protection, • Wrong polarity protection, • Negative Delta Voltage protection, • Zero Delta Voltage protection, • Temperature protection via built-in cooling FAN, • Short and Open circuit protections on cooling FAN, • Timer protection.
Safety Compliance	• AS/NZS 3108:1994; AS/NZS 3350.1:2000; AS/NZS 3350.2.29:2001 • EN 206041A; EN 60335.1; EN 60335.2.29 & CE (EN50082-1) • EMC; C-Tick (AS/NZS 1044:1995) & FCC Part 15 Class B • UL 1310 – Fourth Edition – Class 2 Power Units • CSA Standard C22.2 No. CAN/CSA-223-M91 • CSA Informs – Power Supplies No. 3
Net Weight	0.43 Kg.

Notes: All trademarks referenced in this data sheet belong to their respective owners. Specifications subject to change without notice for further product improvements.

BATTERY TYPES GUIDE

There are two main groups of batteries, primary (non-rechargeable) and secondary (rechargeable). The table below shows some of their most common features and properties:

TYPICAL FEATURES	COMMONLY USED DOMESTIC BATTERIES						
	Carbon	**Alkaline**	**Titanium**	**RAM**	**NiCd**	**NiMH**	**Lithium**
Battery Labelling	Carbon Zinc, Heavy Duty, General purpose	Alkaline	Titanium	Rechargeable Alkaline Manganese	Nickel Cadmium NiCd	Nickel Metal Hydride NiMH	Lithium Li
Battery Class	Primary	Primary	Primary	Secondary	Secondary	Secondary	Primary
Nominal Voltage	1.5V	1.5V	1.5V	1.5V	1.2V	1.2V	1.5V, 3V, 6V
Available Sizes	AAA, AA, C, D, 9V, Prismatic (gum-stick)						
Cost Factor	$	$$	$$$	$$$	$$$	$$$$	$$$$$
Suffer from Memory Effect problem?	No	No	No	No	Yes	No	No
Suitable for use with devices of "Usage-frequency"	**Occasional**	**Moderate**				**Frequent**	
Suitable for use with devices of "Drain Rate"	**Low Drain** Examples: Remote controls & Torches …	**Moderate to High Drain** Examples: General light-duty electronic devices, Motorised toys, Radios and MP3 players … (This group of batteries are not suitable for use with applications as listed under the "High Drain" column).				**High Drain** Examples: Digital Cameras, Discman, Walkman, Heavy-duty motorised devices (Also support most applications as listed under Alkaline batteries).	
Supported By REZAP® RBC889	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**
Standard Cycle Life	1	1	1	Up to 25	Up to 600	Up to 500	1
Cycle Life under REZAP® RBC889	**Not Supported**	Up to 15	Up to 15	Up to 30	Up to 1000	Up to 1000	**Not Supported**

Table 1: Domestic Battery types with some of their common properties.